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EXAMINER

MCLEOD, MARSHALL M

ART UNIT

PAPER NUMBER

2157

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/815,895	Applicant(s) VASUDEVAN ET AL.	
	Examiner MARSHALL MCLEOD	Art Unit 2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08 April 2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-4 and 6-26 are pending in this application. Claim 5 have been cancelled without prejudice.

Claim Objections

2. Claim 4 is objected to because of the following informalities: “wherein said performing one or more operations”. The sentence structure does not make clear what applicant is trying to convey. Appropriate correction is required. Examiner will assume that applicant meant for the missing terms (TCP-A driver) to be placed between the words said (TCP-A driver) performing.

3. Claim 5 is objected to because of the following informalities: It recites the exact limitations as claim 4. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 6-12, 14-16, 18-19 and 23-26 are rejected as being unpatentable over Hendel et al. (Pub. No US 2004/0013117 A1), hereinafter Hendel in view of Pettey (Pub. No US 2003/0014544 A1).

6. With respect to claim 1, Hendel discloses,
- a. receiving an indication on a network component that one or more packets have been received from a network (Page 2, [0025], lines 3-4; i.e. “NIC card receives packets from a network”);
 - b. the network component notifying a TCP-A (transport control protocol - accelerated) driver that the one or more packets have arrived (Page 2, [0025], lines 7-8; i.e. “forward the headers to a host for protocol processing.”);
 - c. a TCP-A driver performing packet processing for at least one of the one or more packets (Page 2, [0025], lines 7-8; i.e. “forward the headers to a host for protocol processing.”); and the TCP-A driver performing one or more operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer (Page 3, [0035], lines 8-10; Page 5, [0072], lines 1-3; Page 6, [0091], lines 1-10).

Hendel does not disclose “TCP-A (transport control protocol - accelerated) driver”.

However, Pettey discloses a “TCP-A (transport control protocol - accelerated) driver” (Page 10, [0089], lines 1-9; i.e. ... “a connection acceleration driver that is connected to a server's TCP/IP stack”).

It would have been obvious to a person skilled in the art at the time of the invention to modify the teachings of Hendel with the teachings of Pettey in order to accelerate selecting a connection while reducing the packet processing time.

7. With respect to claim 10, Hendel discloses,
 - a. A network component capable of (Page 2, [0025], lines 3-4; i.e. "NIC card"):
 - b. receiving an indication on a network component that one or more packets have been received from a network (Page 2, [0025], lines 3-4; i.e. "NIC card receives packets from a network");
 - c. notifying a TCP-A (transport control protocol - accelerated) driver that the one or more packets have arrived (Page 2, [0025], lines 7-8; i.e. "forward the headers to a host for protocol processing.");
 - d. a TCP-A driver performing packet processing for at least one of the one or more packets (Page 2, [0025], lines 7-8; i.e. "forward the headers to a host for protocol processing."); and the TCP-A driver performing one or more operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer (Page 3, [0035], lines 8-10; Page 5, [0072], lines 1-3; Page 6, [0091], lines 1-10).

Hendel does not disclose a "TCP-A (transport control protocol - accelerated) driver".

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However, Pettey discloses a “TCP-A (transport control protocol - accelerated) driver” (Page 10, [0089], lines 1-9; i.e. ... “a connection acceleration driver that is connected to a server's TCP/IP stack”).

It would have been obvious to a person skilled in the art at the time of the invention to modify the teachings of Pettey with the teachings of Hendel in order to accelerate selecting a connection while reducing the packet processing time.

8. With respect to claim 14, Hendel discloses,
 - a. A network component capable of (Page 2, [0025], lines 3-4; i.e. “NIC card”):
 - b. receiving an indication on a network component that one or more packets have been received from a network (Page 2, [0025], lines 3-4; i.e. “NIC card receives packets from a network”);
 - c. notifying a TCP-A (transport control protocol - accelerated) driver that the one or more packets have arrived (Page 2, [0025], lines 7-8; i.e. “forward the headers to a host for protocol processing.”);
 - d. a TCP-A driver performing packet processing for at least one of the one or more packets (Page 2, [0025], lines 7-8; i.e. “forward the headers to a host for protocol processing.”); and the TCP-A driver performing one or more operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer (Page 3, [0035], lines 8-10; Page 5, [0072], lines 1-3; Page 6, [0091], lines 1-10).

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Hendel does not disclose a chipset having a DMA (direct memory access) engine, the chipset communicatively coupled to a TCP-A (Transport Control Protocol - Accelerated).

However, Pettey discloses a chipset having a DMA (direct memory access) engine, the chipset communicatively coupled to a TCP-A (Transport Control Protocol - Accelerated) (Page 10, [0089], lines 1-9; i.e. ... “a connection acceleration driver that is connected to a server's TCP/IP stack”) driver of a processor and to a network component (Page 2, [0016], lines 9-14).

It would have been obvious to a person skilled in the art at the time of the invention to modify the teachings of Hendel with the teachings of Pettey in order to accelerate selecting a connection while reducing the packet processing time.

9. With respect to claim 18, Hendel discloses,
 - a. A machine-readable medium having stored thereon instructions (Claim 30, i.e. a computer readable storage medium storing instructions),
 - b. receiving an indication on a network component that one or more packets have been received from a network (Page 2, [0025], lines 3-4; i.e. “NIC card receives packets from a network”);
 - c. the network component notifying a TCP-A (transport control protocol - accelerated) driver that the one or more packets have arrived (Page 2, [0025], lines 7-8; i.e. “forward the headers to a host for protocol processing.”);
 - d. a TCP-A driver performing packet processing for at least one of the one or more packets (Page 2, [0025], lines 7-8; i.e. “forward the headers to a host for protocol

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processing."); and the TCP-A driver performing one or more operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer (Page 3, [0035], lines 8-10; Page 5, [0072], lines 1-3; Page 6, [0091], lines 1-10).

Hendel does not disclose a "TCP-A (transport control protocol - accelerated) driver".

However, Pettey discloses a "TCP-A (transport control protocol - accelerated) driver" (Page 10, [0089], lines 1-9; i.e. ... "a connection acceleration driver that is connected to a server's TCP/IP stack").

It would have been obvious to a person skilled in the art at the time of the invention to modify the teachings of Pettey with the teachings of Hendel in order to accelerate selecting a connection while reducing the packet processing time.

10. With respect to claim 2, it is rejected for the same reasons as claim 1 above. In addition, Hendel discloses splitting each of the one or more packets into a header and a payload (Page 2, [0025], lines 4-5); and posting each of the header and payload to one or more post buffers (Page 2, [0025], lines 4-8).

11. With respect to claim 6, it is rejected for the same reasons as claim 1 above. In addition, Hendel discloses the data movement module comprises a DMA (direct memory access) engine (Page 2, [0029], lines 1-5; i.e. receiving packet payloads from the communication interface via DMA).

12. With respect to claim 7, it is rejected for the same reasons as claim 6 above. In addition, Hendel discloses the DMA engine resides on a chipset (Page 2, [0030], lines 1-9; i.e. other input/output interfaces that provide DMA capability may be applied).

13. With respect to claim 8, it is rejected for the same reasons as claim 6 above. In addition Hendel discloses the DMA engine resides on a host processor as a support module (Figure 1, Host 140, RDMA buffer(s) 144; Page 2, [0029], lines 1-5; i.e. each host also includes any number of buffers (144, 154).

14. With respect to claim 9, Hendel does not disclose receiving a request on an operating system to transmit data over the network; the operating system notifying the TCP-A driver that there is data to be transmitted; the TCP-A driver performing one or more operations that result in the data being transmitted to the network component; in response to receiving the data, the network component creating one or more packets for transmission by packetizing the data; and the network component transmitting the one or more packets over the network.

However, Pettey discloses receiving a request on an operating system to transmit data over the network (Page 5, [0054], lines 1-18); the operating system notifying the TCP-A driver that there is data to be transmitted (Page 12, [0107], lines 6-12); the TCP-A driver performing one or more operations that result in the data being transmitted to the network component (Page 12, [0105], lines 1-11); in response to receiving the data, the network component creating one or more

packets for transmission by packetizing the data (Page 17, [0136] lines 13-30); and the network component transmitting the one or more packets over the network (Page 17, [0136] lines 13-30).

15. With respect to claim 11, Hendel does not disclose discloses receiving a request to transmit data over the network; and notifying the TCP-A driver that data is ready to be transmitted; wherein: the TCP-A driver is capable of performing one or more operations that result in the data being transmitted to the network component; and the network component is capable of: creating one or more packets for transmission by packetizing the data in response to receiving the data; and transmitting the one or more packets over the network.

However, Pettey discloses receiving a request to transmit data over the network (Page 5, [0054], lines 1-18); and notifying the TCP-A driver that data is ready to be transmitted (Page 12, [0107], lines 6-12); wherein: the TCP-A driver is capable of performing one or more operations that result in the data being transmitted to the network component (Page 12, [0105], lines 1-11); and the network component is capable of: creating one or more packets for transmission by packetizing the data in response to receiving the data (Page 17, [0136] lines 13-30); and transmitting the one or more packets over the network (Page 17, [0136] lines 13-30).

16. With respect to claim 12, it is rejected for the same reasons as claim 10 above. In addition, Hendel discloses wherein in response to receiving an indication on a network component that one or more packets have been received from the network (Page 2, [0025], lines 3-4; i.e. “NIC card receives packets from a network”), the network component is additionally

capable of: splitting each of the one or more packets into a header and a payload (Page 2, [0025], lines 4-5); and posting each of the header and payload to one or more post buffers (Page 2, [0025], lines 4-8).

17. With respect to claim 15, Hendel does not disclose discloses receiving a request to transmit data over the network; and notifying the TCP-A driver that data is ready to be transmitted; wherein: the TCP-A driver is capable of performing one or more operations that result in the data being transmitted to a network component; and the network component is capable of: creating one or more packets for transmission by packetizing the data in response to receiving the data; and transmitting the one or more packets over the network.

However, Pettey discloses receiving a request to transmit data over the network (Page 5, [0054], lines 1-18); and notifying the TCP-A driver that data is ready to be transmitted (Page 12, [0107], lines 6-12); wherein: the TCP-A driver is capable of performing one or more operations that result in the data being transmitted to a network component (Page 12, [0105], lines 1-11); and the network component is capable of: creating one or more packets for transmission by packetizing the data in response to receiving the data (Page 17, [0136] lines 13-30); and transmitting the one or more packets over the network (Page 17, [0136] lines 13-30).

18. With respect to claim 16, it is rejected for the same reasons as claim 14 above. In addition, Hendel discloses wherein in response to receiving an indication on a network component that one or more packets have been received from the network (Page 2, [0025], lines

3-4; i.e. “NIC card receives packets from a network”), the network component is additionally capable of: splitting each of the one or more packets into a header and a payload (Page 2, [0025], lines 4-5); and posting each of the header and payload to one or more post buffers (Page 2, [0025], lines 4-8).

19. With respect to claim 19, it is rejected for the same reasons as claim 18 above. In addition, Hendel discloses splitting each of the one or more packets into a header and a payload (Page 2, [0025], lines 4-5); and posting each of the header and payload to one or more post buffers (Page 2, [0025], lines 4-8).

20. With respect to claim 23, it is rejected for the same reasons as claim 18 above. In addition, Hendel discloses the data movement module comprises a DMA (direct memory access) engine (Page 2, [0029], lines 1-5; i.e. receiving packet payloads from the communication interface via DMA).

21. With respect to claim 24, it is rejected for the same reasons as claim 23 above. In addition, Hendel discloses the DMA engine resides on a chipset (Page 2, [0030], lines 1-9; i.e. other input/output interfaces that provide DMA capability may be applied).

22. With respect to claim 25, it is rejected for the same reasons as claim 23 above. In addition Hendel discloses the DMA engine resides on a host processor as a support module

(Figure 1, Host 140, RDMA buffer(s) 144; Page 2, [0029], lines 1-5; i.e. each host also includes any number of buffers (144, 154).

23. With respect to claim 26, it is rejected for the same reasons as claim 18 above. In addition, Hendel does not disclose receiving a request on an operating system to transmit data over the network; the operating system notifying the TCP-A driver that there is data to be transmitted; the TCP-A driver performing one or more operations that result in the data being transmitted to the network component; in response to receiving the data, the network component creating one or more packets for transmission by packetizing the data; and the network component transmitting the one or more packets over the network.

However, Pettay discloses receiving a request on an operating system to transmit data over the network (Page 5, [0054], lines 1-18); the operating system notifying the TCP-A driver that there is data to be transmitted (Page 12, [0107], lines 6-12); the TCP-A driver performing one or more operations that result in the data being transmitted to the network component (Page 12, [0105], lines 1-11); in response to receiving the data, the network component creating one or more packets for transmission by packetizing the data (Page 17, [0136] lines 13-30); and the network component transmitting the one or more packets over the network (Page 17, [0136] lines 13-30).

24. Claims 4-5, and 21-22 are rejected as being unpatentable over Hendel et al. (Pub. No US 2004/0013117 A1), hereinafter Hendel in view of Pettay (Pub. No US 2003/0014544 A1) and further in view of Cheriton et al. (Patent No US 6,675,200 B1), hereinafter Cheriton.

25. With respect to claim 4, it is rejected for the same reasons as claim 1 above. In addition, neither Hendel nor Pettey discloses operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer comprises sending a request to a data movement module driver to write the one or more corresponding payloads to the read buffer.

However, Cheriton discloses operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer comprises sending a request to a data movement module driver to write the one or more corresponding payloads to the read buffer (Column 8, lines 29-31).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Hendel combined with Pettey, with the teachings of Cheriton in order to achieve faster data movement.

26. With respect to claim 5, it is rejected for the same reasons as claim 4 above.

27. With respect to claim 21, it is rejected for the same reasons as claim 18 above. In addition, neither Hendel nor Pettey discloses operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer comprises sending a request to a data movement module driver to write the one or more corresponding payloads to the read buffer.

However, Cheriton discloses operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer comprises sending a request to a data movement module driver to write the one or more corresponding payloads to the read buffer (Column 8, lines 29-31).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Hendel combined with Pettey, with the teachings of Cheriton in order to achieve faster data movement.

28. With respect to claim 22, it rejected for the same reasons as claim 18 above. In addition, neither Hendel nor Pettey discloses operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer comprises sending a request to a data movement module driver to write the one or more corresponding payloads to the read buffer.

However, Cheriton discloses operations that result in a data movement module placing one or more corresponding payloads of the at least one of the one or more packets into a read buffer comprises sending a request to a data movement module driver to write the one or more corresponding payloads to the read buffer (Column 8, lines 29-31).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Hendel combined with Pettey, with the teachings of Cheriton in order to achieve faster data movement.

29. Claims 3, 13, 17, and 20 are rejected as being unpatentable over Hendel in view of Pettey, and further in view of Seidl et al. (Pub. No US 2003/0217231 A1), hereinafter Seidl.

30. With respect to claims 3, 13, 17, and 20, the combination of Hendel and Pettey discloses wherein the TCP-A driver performs packet processing by processing each of the headers (Hendel, Page 4, [0054], lines 1-6; i.e. the interface may parse any or all of the layer headers).

The combination of Hendel and Pettey does not disclose that the TCP-A driver is additionally capable of fetching a next header of the one or more headers prior to completing the processing of the current header.

However, Seidl discloses that the TCP-A driver is additionally capable of fetching a next header of the one or more headers prior to completing the processing of the current header (Page 1, [0017], lines 1-4; i.e. Note that this may involve prefetching a header...).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Hendel combined with Pettey, with the teachings of Seidl in order to speed up the transfer of data by reducing the time it takes to fetch the data.

Response to Arguments

31. Applicant's arguments filed 08 April 2008 have been carefully and respectfully considered in light of the instant amendment, but are still not persuasive.

32. With respect to applicants' arguments regarding the claim objections on page 10 of the instant arguments. The respective objections have been withdrawn in light of the instant amendments.

33. With respect to applicants' argument in the middle of page 11 of the instant arguments, in regards to the rejection of claim 1. Applicant contends that the prior art Hendel does not teach or suggest at least: "a TCP-A driver performing TCP stack processing by parsing a header in at least one of the one or more packets to determine the protocol context associated with a current connection, and performing TCP protocol compliance for the at least one of the one or more packets;" as claimed by the Applicants in Claim 1 (as amended.). The examiner respectfully disagrees, and refers applicant to the rejection of claim 1 above in conjunction with prior art Hendel (Page 4; [0054], lines 1-6; i.e. which discloses parsing a packet header to determine the protocol). The examiner also respectfully reminds applicant that claim 1 is a 35 U.S.C. 103(a) rejection and that Pettey is combined with Hendel and must be viewed together as combined. Accordingly, examiner strongly believes that a *prima facie* case has been clearly established with respect to the prior art rejection of the instant claim, given its broadest reasonable interpretation. Furthermore due to applicants' amendment to claim 1 the examiner respectfully state to applicant

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that prior art Pettey also discloses a “TCP-A driver performing stack processing” at (Page 9; [0084], lines 25-29).

34. With respect to applicants’ argument at the bottom of page 13 of the instant arguments, in regards to the rejection of claim 13. Applicant contends that the prior art Seidl fails to disclose or suggest at least: “TCP-A driver is additionally capable of fetching a next header of the one or more headers prior to completing the processing of the current header”. The examiner respectfully disagrees, and refers applicant to the rejection of claim 13 above in conjunction with prior art Seidl (Page 1; [0017], lines 1-4; i.e. which discloses “...prefetching a header for the first object; this is reads on applicants claim of fetching a next header of the one or more headers prior to completing the processing of the current header. Because prefetching a header is the process of fetching a next header of the one or more headers prior to completing the processing of the current header). The examiner also respectfully reminds applicant that claim 13 is a 35 U.S.C. 103(a) rejection and that Pettey is combined with Hendel and further in view of Seidl and must be viewed together as combined. Accordingly, examiner strongly believes that a *prima facie* case has been clearly established with respect to the prior art rejection of the instant claim, given its broadest reasonable interpretation.

35. With respect to applicant’s arguments in the middle of page 13 of the instant arguments, in regards to the rejections of independent claims 10, 14 and 18. Applicant contends that because the claims recite the amended like distinction of claim above, they are believed to be non-obvious over the cited references. The examiner respectfully disagrees, and refers the

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applicant to the examiner's response above to applicants' argument of claim 1 in conjunction with the rejections of claims 10, 14 and 18 above.

36. With respect to applicant's arguments in the middle of page 13 of the instant arguments, in regards to the rejections of dependent claims 2-4, 6-9, 11-13, 15-17, and 19-26. Applicant contends that because the claims are dependent on independent claims 1, 10, 14 and 18, they are believed to be non-obvious over the cited references. The examiner respectfully disagrees, and refers the applicant to the examiner's responses above to the applicants' arguments for independent claims 1, 10, 14 and 18, in conjunction with the rejections above for dependent claims 2-4, 6-9, 11-13, 15-17, and 19-26.

Conclusion

37. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARSHALL MCLEOD whose telephone number is (571)270-3808. The examiner can normally be reached on Monday - Thursday 6:30 a.m-4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marshall McLeod
6/16/2008

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/Ario Etienne/

Supervisory Patent Examiner, Art Unit 2157